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High Beryllium Content Plasma Polymer Ablator Coatings for ICF Targets*, R. M. Brusasco, S. A. Letts, M. D. Saculla and R. C. Cook, Lawrence Livermore National Laboratory, Livermore, CA 94550

Experiments planned for the National Ignition Facility (NIF) will require a flexible fuel capsule fabrication methodology, including the incorporation of dopants into the capsule wall. Preliminary calculations show that a high level of beryllium in the capsule ablator may significantly improve the overall implosion performance. This paper presents preliminary results of our program to produce high content beryllium coatings using plasma polymerization techniques that have historically been used for CH ablator application. This is accomplished by using a volatile organoberyllium precursor in a conventional plasma polymerization coater, taking appropriate steps to manage the increased hazard level. Factors such as deposition rate, coating roughness, degree of beryllium incorporation and stability to the ambient environment, which usually dominate the development of any plasma polymerization technique, will be discussed.

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